WHISKEY JACK WATER SYSTEM (PWSNO 1090085)
SOURCE WATER ASSESSMENT REPORT

May 28, 2002

State of Idaho
Department of Environmental Quality

Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the act. This risk assessment is based on a land use inventory in the well recharge zone, sensitivity factors associated with how the well was constructed, and aquifer characteristics.

This report, *Source Water Assessment for Whiskey Jack Water System*, describes the public drinking water wells; the well recharge zone and potential contaminant sites located inside the recharge zone boundaries. This assessment, taken into account with local knowledge and concerns, should be used as a planning tool to develop and implement appropriate protection measures for this public water system. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

Whiskey Jack Water System drinking water is supplied by two 234 foot deep wells pumping from a small aquifer near Kootenai Bay on the north side of Lake Pend Oreille. Plans for a third well were approved in November 2000, but the well was not on line when the system was inspected in March 2002. The water system serves a population of 60 people a housing development composed of condominiums and single-family homes. Whiskey Jack's water is treated to remove excessive iron and arsenic. Because the concentration of the inorganic chemical arsenic in the untreated well water exceeds the Maximum Contaminant Level, the wells were automatically assigned a high ranking relative to inorganic chemicals in a groundwater Susceptibility Analysis DEQ conducted May 2, 2002. The wells ranked in the low risk category relative to other classes of regulated contaminants.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

Whiskey Jack Water System has installed a state of the art ion exchange filter that removes arsenic. The system is also cooperating in a University of Idaho arsenic removal research project. Whiskey Jack is well run and mostly in compliance with *Idaho Rules for Public Drinking Water Systems.* Repairing the electrical conduit on Well #1 and developing a cross connection control program as required following the March 2002 sanitary survey, are particularly important from the standpoint of contamination prevention. Voluntary drinking water protection measures Whiskey Jack should consider are covering the well heads and fencing the area around them.

Because the water system may not have jurisdiction over the entire recharge zone delineated for its wells it will be important to establish partnerships with neighboring landowners to regulate land uses and activities that have the potential to degrade ground water quality. Due to the time involved with the movement of ground water, source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

For assistance in developing protection strategies, please contact your regional Department of Environmental Quality office or the Idaho Rural Water Association.

SOURCE WATER ASSESSMENT FOR WHISKEY JACK WATER SYSTEM

Section 1. Introduction - Basis for Assessment

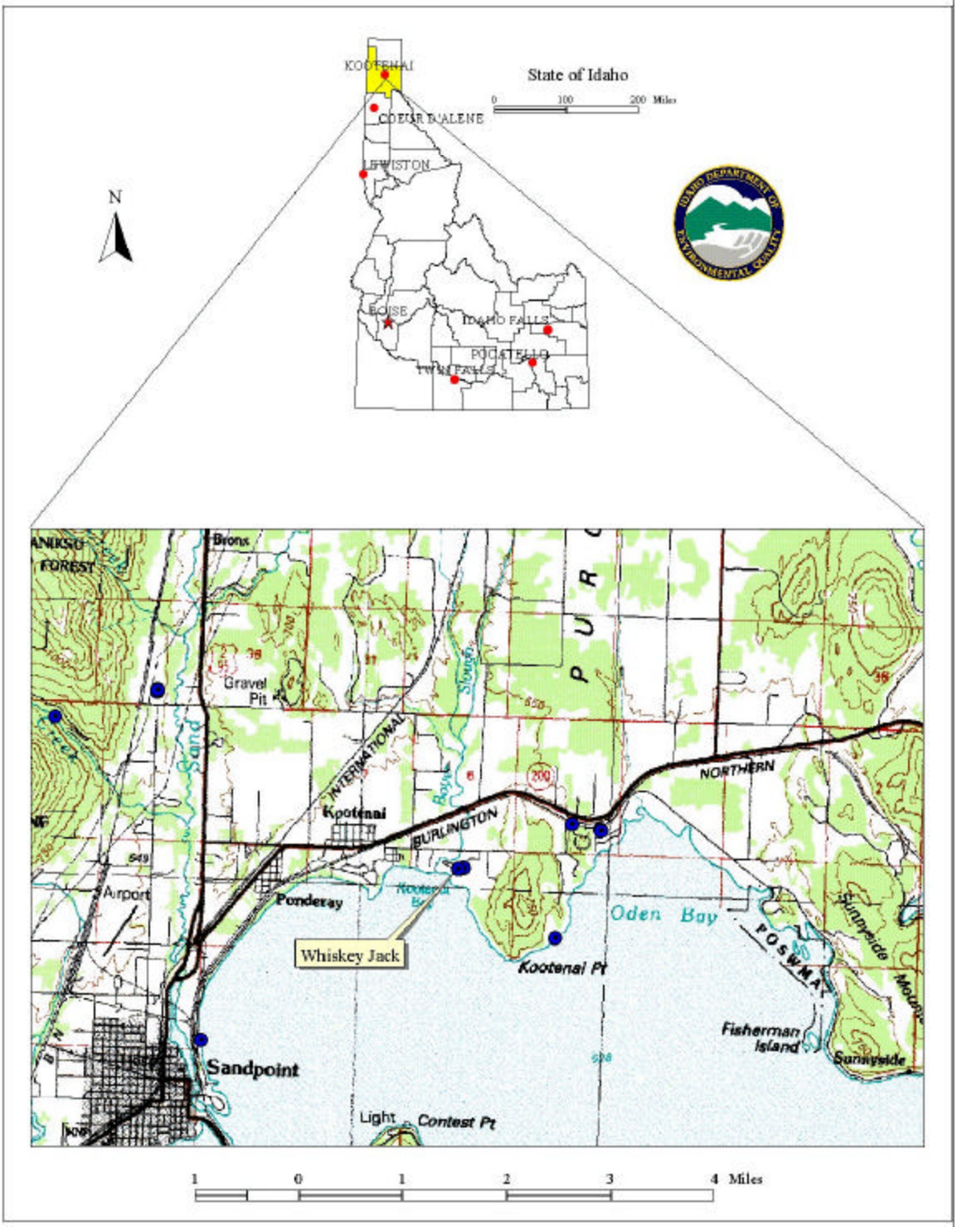
The following sections contain information necessary for understanding how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and an inventory of significant potential sources of contamination identified within that area are included. The ground water susceptibility analysis worksheets used to develop this assessment are attached.

Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (DEQ) is required by the U.S. Environmental Protection Agency (EPA) to assess every public drinking water source in Idaho for its relative susceptibility to contaminants regulated by the Safe Drinking Water Act. These assessments are based on a land use inventory inside the delineated recharge zones, sensitivity factors associated with how the well is constructed, and aquifer characteristics. The state must complete more than 2900 assessments by May of 2003. Because resources and the time available to accomplish assessments are limited, an in-depth, site-specific investigation for every public water system is not possible.

The results of the source water assessment should <u>not be</u> used as an absolute measure of risk and they should <u>not be</u> used to undermine public confidence in the water system. The ultimate goal of this assessment is to provide data to local communities for developing a protection strategy for their drinking water supply. The Idaho Department of Environmental Quality recognizes that pollution prevention activities generally require less time and money to implement than treating a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Wellhead or source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Figure 1. Geographic Location of Whiskey Jack Water System



Section 2. Preparing for the Assessment

Defining the Zones of Contribution - Delineation

The delineation process establishes the physical area around a well that will become the focal point of the assessment. The process includes mapping the boundaries of the well recharge area into time of travel zones indicating the number of years necessary for a particle of water to reach a well. DEQ used a refined computer model approved by the EPA to determine the extent of well recharge zones for community water systems. The computer model used data assimilated by DEQ from a variety of sources including local well logs.

Whiskey Jack Water System serves a community of 60 people in a residential development about one mile east of Kootenai, Idaho (Figure 1). Drinking water for Whiskey Jack Water System customers is supplied by two 234-foot deep wells. Well #1 produces about 50 gpm. The capacity of Well #2 is 45 gpm.

The delineated source water assessment area for Whiskey Jack Water System is about 0.75 miles long and covers 34 acres. It is divided into 0-3, 3-6 and 6-10 year time of travel zones. The primary direction of ground water flow is from northeast to southwest (Figure 2).

Identifying Potential Sources of Contamination

The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. Inventories for public water systems in Idaho were conducted in two-phases. The first phase involved identifying and documenting potential contaminant sources within the source water assessment areas through the use of computer databases and Geographic Information System maps developed by DEQ. The maps and inventory lists were then sent to system operators for verification and correction in the second or enhanced part of the inventory process.

Figure 2, *Whiskey Jack Water System Delineation and Potential Contaminant Inventory* on page 7 of this report shows the location of the Whiskey Jack Water System wells, and the zone of contribution DEQ delineated for them. The predominant land use in the recharge zone is suburban residential.

Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. When a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation.

Section 3. Susceptibility Analysis

The susceptibility to contamination of all groundwater sources in Idaho is being assessed on the following factors:

- physical integrity of the well,
- hydrologic characteristics,
- land use characteristics, and potentially significant contaminant sources
- historic water quality

The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. A high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility ranking. The Susceptibility Analysis Worksheets in Attachment A show in detail how the Whiskey Jack Water System wells scored.

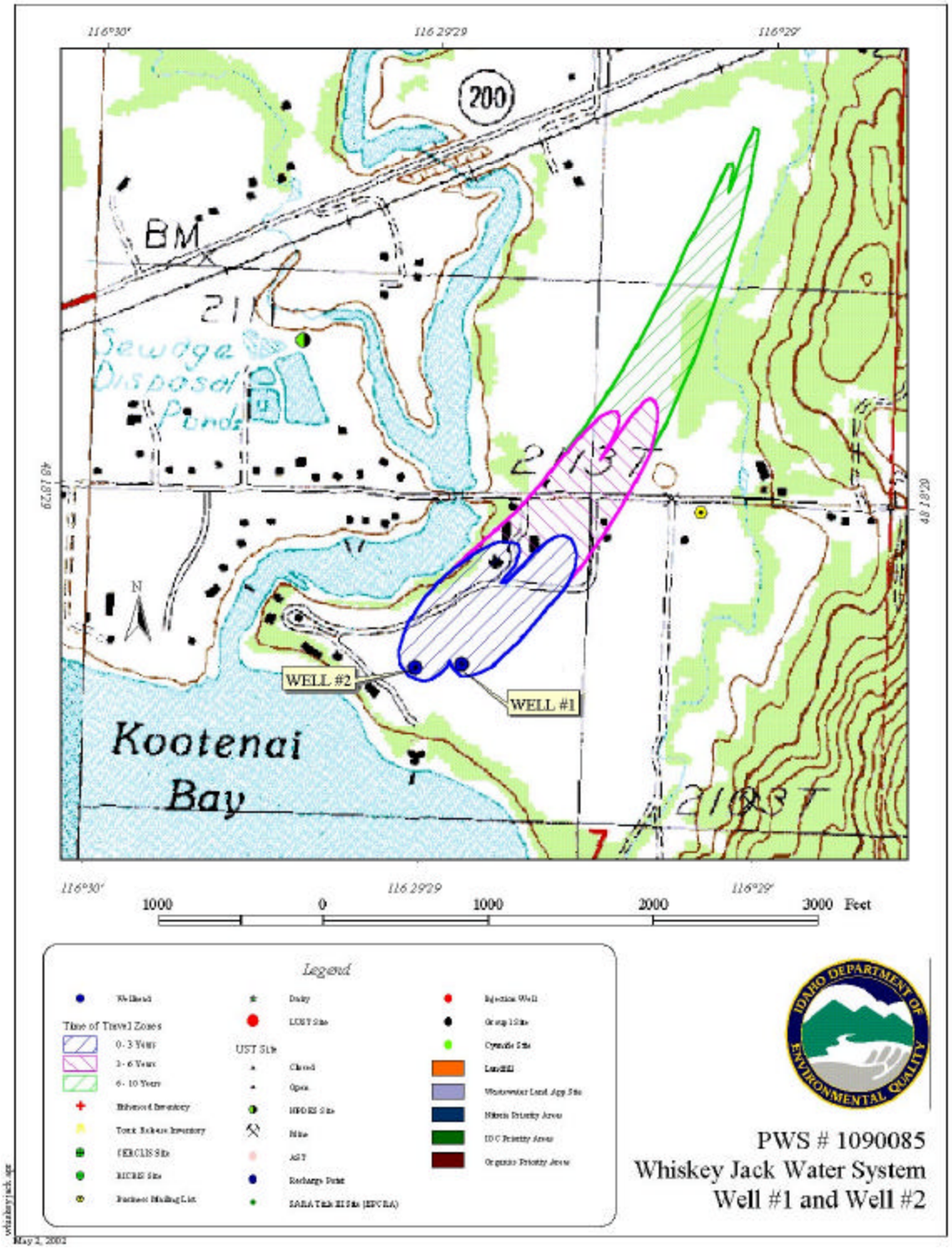
Well Construction

Well construction directly affects the ability of the wells to protect the aquifer from contaminants. Lower scores imply a well that can better protect the water. This portion of the susceptibility analysis relies on information from individual well logs and from the most recent sanitary survey of the public water system. The well log for Well #2 is not on file with DEQ. The Whiskey Jack system was last inspected on March 1, 2002.

The Whiskey Jack Water System wells were drilled in the early 1990s to replace a surface water intake drawing from Lake Pend Oreille. Well #1 has a 6-inch steel casing that extends from 12 inches above ground to the full depth of the well. A stainless steel well screen, set between 219 and 234 feet, is below a thick clay layer. The 18-foot deep surface seal terminates in a clay stratum. The static water level reported on the well log is 12 feet below the surface. A detached electrical conduit compromising the well seal was noted during the sanitary survey.

Well #2 is about 400 feet southeast of Well #1. The driller's report for the well is not available, but because the wells are close and are reported to be the same depth, the soil characteristics and static water level for Well#2 is assumed to be similar to those for Well #1. There were no deficiencies noted in wellhead or surface seal maintenance during the sanitary survey.

Figure 2. Whiskey Jack Water System Delineation and Potential Contaminant Inventory.



Hydrologic Sensitivity

The hydrologic sensitivity scores for the Whiskey Jack Water System wells were 3 points out six points possible. The scores reflect natural geologic conditions in the recharge zone as a whole and at the well sites. Soils in the 3-6 and 6-10 year time of travel zones for the Whiskey Jack wells are classified as moderately well drained to well drained. The soils nearer the wells are poorly drained. Poorly drained to moderately well drained soils are deemed more protective of ground water than soils which drain faster. There are two deep clay layers above the water table at the well sites that protect the wells from the vertical transport of contaminants.

Potential Contaminant Sources and Land Use

Land use within The Whiskey Jack Water System well recharge zone is suburban residential. Roads near the well and crossing the delineation boundaries appear to carry a low volume of local traffic, with little potential for spills from vehicles carrying hazardous materials or petroleum products. No potential contaminant sites are documented inside the recharge zone.

Historic Water Quality

The most important water quality issue Whiskey Jack was had to contend with is naturally occurring arsenic contamination. The water also contains iron and manganese which cause taste and color problems, but are not a health threat. The system has installed a state of the art ion exchange filter to remove arsenic. The water is first run through a water-softening filter to remove iron, then it is chlorinated before passing through a resin bead ion exchange filter that traps the arsenic. The system is also participating in a University of Idaho research project devoted to development of more efficient, cost effective arsenic removal.

In the period from September 1992 through August 2001, 5 monthly samples tested positive for total coliform bacteria. Total coliform bacteria were not present in follow up testing. Chemical and radiological test results are summarized below. The volatile organic chemical Tetrachloroethylene is widely used for dry cleaning and for metal degreasing. The Total Trihalomethanes (TTHM) listed on the table include Bromodichloromethane and Chloroform. They are by products of disinfection with chlorine.

Table 1. Whiskey Jack Water System Chemical and Radiological Test Results

Primary IOC Contaminants (Mandatory Tests)							
Contaminant	MCL (mg/l)	Results (mg/l)	Dates	Contaminant	MCL (mg/l)	Results (mg/l)	Dates
Antimony	0.006	ND	6/19/90 to 12/11/00	Nitrate	10	ND to 0.035	5/4/93 to 12/11/00
Arsenic	0.01	0.000300 - 0.054	6/19/90 to 3/18/02	Nickel	N/A	ND	6/19/90 to 12/11/00
Barium	2	0.118	8/20/96	Selenium	0.05	ND	6/19/90 to 12/11/00
Beryllium	0.004	ND	6/19/90 to 12/11/00	Sodium	N/A	32.8 to 143.0	6/19/90 to 7/24/01
Cadmium	0.005	ND	6/19/90 to 12/11/00	Thallium	0.002	ND	6/19/90 to 12/11/00
Chromium	0.1	ND	6/19/90 to 12/11/00	Cyanide	0.02	ND	6/19/90 to 12/11/00
Mercury	0.002	ND	6/19/90 to 12/11/00	Fluoride	4.0	0.23, 0.4	6/19/90, 7/24/01

Secondary and Other IOC Contaminants (Optional Tests)			
Contaminant	Recommended Maximum (mg/l)	Results (mg/l)	Dates
Calcium	--	0.11 to 59.0	6/19/90 to 3/18/02
Manganese	--	0.01 to 0.43	9/12/91 to 8/29/94
Iron	--	0.04 to 1.83	6/19/90 to 8/29/94
Sulfate	--	6.73	8/20/96

Regulated and Unregulated Synthetic Organic Chemicals		
Contaminant	Results	Dates
29 Regulated and 13 Unregulated Synthetic Organic Compounds	None Detected	8/31/93 to 9/29/98

Regulated and Unregulated Volatile Organic Chemicals		
Contaminant	Results	Dates
21 Regulated And 16 Unregulated Volatile Organic Compounds	None Detected Except As Noted Below	8/31/93 to 9/29/98
Tetrachloroethylene (MCL = 5.0 µg/l)	0.5 µg/l	8/31/93
Bromodichloromethane	1.0 µg/l	9/29/98
Chloroform	10.6 µg/l	9/29/98
Total Trihalomethanes (TTHM) (MCL = 100µg/l)	11.6 µg/l	9/29/98

Radiological Contaminants			
Contaminant	MCL	Results	Dates
Gross Alpha, Including Ra & U	15 pC/l	0.6 to 1.3 pC/l	6/19/90 to 9/29/98
Gross Beta Particle Activity	4 mrem/year	1.3 to 5.6 mrem	6/19/90 to 9/29/98

ND = none detected

Final Susceptibility Ranking

The Whiskey Jack Water System wells automatically ranked highly susceptible to inorganic chemical contamination because of the arsenic concentration in the untreated well water. The wells are at low risk for microbial, volatile or synthetic organic chemical contamination. The detection of a volatile organic chemical like Tetrachloroethylene usually results in an automatic high susceptibility ranking relative to that class of contaminant. In this case however, the concentration observed was low in comparison with the Maximum Contaminant Level for Tetrachloroethylene, and it was not detected in subsequent testing.

The final scores for the susceptibility analysis were determined using the following formulas:

1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)
2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

The final ranking categories are as follows:

- 0 - 5 Low Susceptibility
- 6 - 12 Moderate Susceptibility
- > 13 High Susceptibility

Table 2. Summary of Whiskey Jack Water System Susceptibility Evaluation

Final Susceptibility Scores/ Ranking				
	IOC	VOC	SOC	Microbial
Well #1	*High	5/Low	5/Low	5/Low
Well #2	*High	4/Low	4/Low	4/Low

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical
HIGH* - Indicates source automatically scored highly susceptibile due to presence of an IOC above the maximum contaminant level in the tested drinking water

Section 4. Options for Source Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

The Whiskey Jack Water System already has some important drinking water protections in place. The system is well run. Operation and maintenance of the system is mostly in compliance with *Idaho Rules for Public Drinking Water Systems*. Repairing an electrical conduit that compromises the seal on Well #1 is the most urgent drinking water protection measure noted on the March 2002 sanitary survey. A broken seal can provide a direct pathway into the ground water for surface contaminants.

Cross connection control is also important for preventing contamination of the wells and distribution system during periods of low pressure. Voluntary drinking water protection measures Whiskey Jack should consider are covering the well heads and fencing the area around them for security reasons and to control activities that could inadvertently cause contamination. Guidelines for protecting public drinking water systems through increased security measures are available on the DEQ website, www2.state.id.us/deq/water/water1.htm.

Every public water system should develop a drinking water emergency response plan. There is a simple fill-in-the-blanks form available on the website mentioned above to guide systems through the emergency planning process.

Because Whiskey Jack Water System may not have jurisdiction over the entire recharge zone delineated for its wells it will be important to establish partnerships with neighboring landowners to regulate land uses and activities that have the potential to degrade ground water quality. Some of them may not be aware that their property is in a sensitive area where household, agricultural or business practices could have a negative impact on nearby wells. Public awareness and education is an important component of a drinking water protection plan, so Whiskey Jack should consider promoting programs like Home*A*Syst or Farm*A*Syst in the recharge zone. These are voluntary programs that help people assess environmental risks on their property and find technical support for making needed changes.

Due to the time involved with the movement of ground water, wellhead protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

Assistance

Public water suppliers and users may call the following IDEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the IDEQ office for preliminary review and comments.

Coeur d'Alene Regional DEQ Office (208) 769-1422

State IDEQ Office (208) 373-0502

Website: http://www.deq.state.id.us

Water suppliers serving fewer than 10,000 persons may contact Melinda Harper, Idaho Rural Water Association, at (208) 343-7001 for assistance with drinking water (formerly wellhead protection) strategies.

References Cited

Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, 1997. "Recommended Standards for Water Works."

Idaho Department of Agriculture, 1998. Unpublished Data.

Idaho Division of Environmental Quality, 1994. Ground Water and Soils Reconnaissance of the Lower Payette Area, Payette County, Idaho. Ground Water Quality Technical Report No. 5. Idaho Division of Environmental Quality. December 1994.

Idaho Division of Environmental Quality, 1996. Lower Payette River Agriculture Irrigation Water Return Study and Ground Water Evaluation, Payette County, Idaho. Water Quality Status Report No. 115.

Idaho Department of Environmental Quality, 1997. Design Standards for Public Drinking Water Systems. IDAPA 58.01.08.550.01.

Idaho Department of Environmental Quality, 2000. City of Fruitland Wellhead Viability Project 319 Grant Final Report July 2000.

Idaho Department of Water Resources, 1993. Administrative Rules of the Idaho Water Resource Board: Well Construction Standards Rules. IDAPA 37.03.09.

Natural Resource Conservation Service, 1991. Idaho Snake-Payette Rivers Hydrologic Unit Plan of Work. March 1991.

United States Geological Survey, 1986. Quality of Ground Water in the Payette River Basin, Idaho. United States Geological Survey. Water Resources Investigation Report 86-4013.

University of Idaho. 1986. Ground Water Resources in a Portion of Payette County, Idaho. Idaho Water Resources Research Institute. University of Idaho. Moscow, Idaho. April 1986.

Attachment A

Whiskey Jack Water System Susceptibility Analysis Worksheets

Ground Water Susceptibility

Public Water System Name : **WHISKEY JACK WATER SYSTEM** Source: **WELL #1**

Public Water System Number : **1090085** 5/2/02 1:59:20 PM

1. System Construction		SCORE			
Drill Date	1990's				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES 2002				
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	NO	1			
Casing and annular seal extend to low permeability unit	YES	0			
Highest production 100 feet below static water level	YES	0			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		**2**			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	NO	0			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	YES	0			
Total Hydrologic Score		**3**			
		IOC	VOC	SOC	Microbial
3. Potential Contaminant / Land Use - ZONE 1A (Sanitary Setback)		Score	Score	Score	Score
Land Use Zone 1A	SUBURBAN	1	1	1	1
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	YES	YES	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		**1**	**1**	**1**	**1**
Potential Contaminant / Land Use - ZONE 1B (3 YR. TOT)					
Contaminant sources present (Number of Sources)	NO	0	0	0	0
(Score = # Sources X 2) 8 Points Maximum		0	0	0	0
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		**0**	**0**	**0**	**0**
Potential Contaminant / Land Use - ZONE II (6 YR. TOT)					
Contaminant Sources Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
Land Use Zone II	Less than 25% Agricultural Land	0	0	0	
Potential Contaminant Source / Land Use Score - Zone II		**0**	**0**	**0**	**0**
Potential Contaminant / Land Use - ZONE III (10 YR. TOT)					
Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of Zone	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		**0**	**0**	**0**	**0**
Cumulative Potential Contaminant / Land Use Score		**1**	**1**	**1**	**1**
4. Final Susceptibility Source Score		**5**	**5**	**5**	**5**
5. Final Well Ranking		**High**	Low	Low	Low

Ground Water Susceptibility

Public Water System Name : **WHISKEY JACK WATER SYSTEM** Source: **WELL #2**

Public Water System Number : **1090085** 5/2/02 1:59:36 PM

1. System Construction		SCORE			
Drill Date	UNKNOWN				
Driller Log Available	NO				
Sanitary Survey (if yes, indicate date of last survey)	YES 2002				
Well meets IDWR construction standards	UNKNOWN	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	YES	0			
Highest production 100 feet below static water level	YES	0			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		**1**			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	NO	0			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	YES	0			
Total Hydrologic Score		**3**			
		IOC	VOC	SOC	Microbial
3. Potential Contaminant / Land Use - ZONE 1A (Sanitary Setback)		Score	Score	Score	Score
Land Use Zone 1A	SUBURBAN	1	1	1	1
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	YES	YES	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		**1**	**1**	**1**	**1**
Potential Contaminant / Land Use - ZONE 1B (3 YR. TOT)					
Contaminant sources present (Number of Sources)	NO	0	0	0	0
(Score = # Sources X 2) 8 Points Maximum		0	0	0	0
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		**0**	**0**	**0**	**0**
Potential Contaminant / Land Use - ZONE II (6 YR. TOT)					
Contaminant Sources Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
Land Use Zone II	Less than 25% Agricultural Land	0	0	0	
Potential Contaminant Source / Land Use Score - Zone II		**0**	**0**	**0**	**0**
Potential Contaminant / Land Use - ZONE III (10 YR. TOT)					
Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of Zone	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		**0**	**0**	**0**	**0**
Cumulative Potential Contaminant / Land Use Score		**1**	**1**	**1**	**1**
4. Final Susceptibility Source Score		**4**	**4**	**4**	**4**
5. Final Well Ranking		**High**	Low	Low	Low

POTENTIAL CONTAMINANT INVENTORY
LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

BML (Business Mailing List)– This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as Superfund is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

Closed Or Open UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.